

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,101,795 B1
APPLICATION NO. : 09/678266
DATED : October 3, 2000
INVENTOR(S) : Xi et al.

Page 1 of 5

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page, Item (63), Related U.S. Application Data: Please add the following priority data:

--Continuation-in-part of application No. 09/605,593, filed on Jun. 28, 2000,
now Pat. No. 6,551,929.--

Title Page, Item (56), References Cited, U.S. PATENT DOCUMENTS: Please include the following references:

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page, Item (56), (cont'd)

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Title Page, Item (56), References Cited, FOREIGN PATENT DOCUMENTS: Please include the following references:

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Title Page, Item (56), References Cited, OTHER PUBLICATIONS: Please include the following references:

--Klaus, et al. "Atomically Controlled Growth of Tungsten and Tungsten Nitride Using Sequential Surface Reactions," Applied Surface Science, 162-163 (2000) 479-491.

"Pulsed Nucleation for Ultra-High Aspect Ratio Tungsten Plugfill"; San-Hyeob Lee et al.; Materials Research Society, 2002, 649-653.

Yang et al. "Atomic Layer Deposition of Tungsten Film from WF_6/B_2H_6 : Nucleation Layer for Advanced Semiconductor Device," Conference Proceedings ULSI XVII (2002) Materials Research Society.--

Column 1, Line 6: Before Background of the Disclosure, insert

--This application is a continuation-in-part of U.S. Patent Application Serial No. 09/605,593, filed June 28, 2000, now issued as U.S. Patent No. 6,551,929.--

Column 5, Line 13: Change " A_{ax} " to -- Aa_x --

Column 5, Line 22: Change "to" to -- t_1 --

Column 7, Claim 1, Line 34: Before "layer", insert --nucleation layer and a bulk deposition--

Column 7, Claim 1, Line 36: Before "nucleation", insert --refractory metal--

Column 7, Claim 1, Line 38: Delete "atop of said nucleation layer,"

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 7, Claim 1, Line 39: Before "employing", insert --on said nucleation layer by--

Column 7, Claim 1, Line 40: Change "subject said nucleation layer to a bulk deposition of a compound" to --bulk deposit refractory metal--

Column 7, Claim 2, Line 43: Delete "forming atop of said nucleation layer includes forming"

Column 7, Claim 2, Line 45: Before "employing", insert --is deposited--

Column 7, Claim 3, Line 46: Delete "forming atop of said nucleation layer includes forming"

Column 7, Claim 3, Line 48: Before "employing", insert --is deposited--

Column 7, Claim 4, Line 50: Delete "introducing said first and second gases therein so as to purge said processing chamber of said first reactive gas by"

Column 8, Claim 4, Line 1: Change "therein," to --into the processing chamber after exposing said substrate to the first reactive gas and--

Column 8, Claim 6, Line 9: Change "a" to --the refractory metal--

Column 8, Claim 6, Line 10: Before "subsequently", insert --and--

Column 8, Claim 7, Line 15: Change "a" to --the refractory metal--

Column 8, Claim 9, Line 22: Change "subject" to --subjecting--

Column 8, Claim 10, Line 24: Before "layer", insert --nucleation layer and a bulk deposition--

Column 8, Claim 10, Line 27: Before "while", insert --wherein said second reactive gas comprises a refractory metal selected from the group consisting of titanium (Ti) and tungsten (W),--

Column 8, Claim 11, Line 38: Delete "said second reactive gas includes a refractory metal and"

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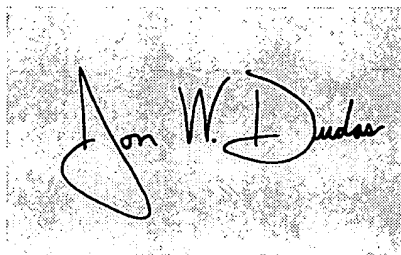
Column 8, Claim 11, Line 40: Change "includes" to --comprises--

Column 8, Claim 12, Line 42: Delete "selected from the group consisting of titanium (Ti) and"

Column 8, Claim 13, Line 46: Delete "first"

Signed and Sealed this

Thirteenth Day of February, 2007

A handwritten signature in black ink, reading "Jon W. Dudas", is written over a rectangular area with a light gray, textured background.

JON W. DUDAS

Director of the United States Patent and Trademark Office